



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2012-1014; Directorate Identifier 2010-SW-058-AD;  
Amendment 39-17404; AD 2013-06-07]**

**RIN 2120-AA64**

**Airworthiness Directives; Eurocopter France Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for Eurocopter France (Eurocopter) Model SA-365N1, AS-365N2, and AS 365 N3 helicopters. This AD requires revising the Limitations section of the Rotorcraft Flight Manual (RFM) to prohibit flight in instrument meteorological conditions (IMC) or night visual flight rules (VFR) for each helicopter with a vertical gyro unit GV76-1 installed upon a non-reinforced shelf in the rear cargo compartment. Also, this AD requires modifying the GV76-1 vertical gyro unit shelf and testing for correct function of the navigation systems. This AD was prompted by flight crew reports of deviations between the displayed attitude on the attitude display screen and the independent electromechanical standby attitude indicator. The actions of this AD are intended to prevent an undetected flight display error of a slow drift in the roll axis, disorientation of the pilot, and subsequent loss of control of the helicopter.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain document listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this AD, contact American Eurocopter Corporation, 2701 N. Forum Drive, Grand Prairie, Texas 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at <http://www.eurocopter.com/techpub>. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, any incorporated-by-reference service information, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (phone: 800-647-5527) is U.S. Department of Transportation, Docket Operations Office, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Mark F. Wiley, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email [mark.wiley@faa.gov](mailto:mark.wiley@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

On September 25, 2012, at 77 FR 58971, the Federal Register published our notice of proposed rulemaking (NPRM), which proposed to amend 14 CFR part 39 to include an AD that would apply to certain Eurocopter Model SA-365N1, AS-365N2, and AS 365 N3 helicopters, with the GV76-1 vertical gyro unit installed on the left-hand (LH) or right-hand (RH) shelf in the rear cargo compartment, pre-MOD 365P081895. That NPRM proposed to require revising the Limitations section of the RFM to prohibit flight in IMC or night VFR until the GV76-1 vertical gyro unit shelf is reinforced and tested. The proposed requirements were intended to prevent an undetected flight display error of a slow drift in the roll axis, disorientation of the pilot, and subsequent loss of control of the helicopter.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, issued EASA AD No. 2010-0100R1, dated August 4, 2010, and corrected August 11, 2010, to correct an unsafe condition for the specified Eurocopter model helicopters. EASA advises that a slow drift in the roll axis on the pilot's and co-pilot's attitude display screens occurred simultaneously during flight on several helicopters equipped with the GV76-1 vertical gyro unit installed in the rear cargo compartment. EASA advises "these drifts were caused by a fault in the vertical gyros unit installation in the rear cargo." EASA states that in certain configurations, the GV76-1 vertical gyro unit installation has a natural mode close to the main rotor's harmonic frequency that generates rather significant vibratory levels on the GV76-1 unit by amplifying the intrinsic vibration of the aircraft. The faults are caused by these vibratory

levels. EASA also states that the critical mode is essentially due to bending on the horizontal cross-members, which support the GV76-1 shelf.

### **Comments**

We gave the public the opportunity to participate in developing this AD, but we did not receive any comments on the NPRM (77 FR 58971, September 25, 2012).

### **FAA's Determination**

These helicopters have been approved by the aviation authority of France and are approved for operation in the United States. Pursuant to our bilateral agreement with France, EASA, its technical representative, has notified us of the unsafe condition described in the EASA AD. We are issuing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs and that air safety and the public interest require adopting the AD requirements as proposed.

### **Differences Between this AD and the EASA AD**

We do not use the calendar dates, which have already passed. This AD prohibits flight in IMC or night VFR until MOD 365P081895 is accomplished.

### **Related Service Information**

Eurocopter issued Alert Service Bulletin (ASB) No. 34.00.31, Revision 1, dated July 28, 2010 (ASB 34.00.31), for FAA type-certificated Model SA-365N1, AS-365N2, and AS 365 N3 helicopters and for military non-FAA type-certificated Model AS-365F, Fi, and K helicopters. ASB 34.00.31 specifies reinforcing the shelves of the vertical gyros GV76-1 (in cargo compartment) on the RH or LH side. EASA classified this ASB as mandatory and issued AD No. 2010-0100R1, dated August 4, 2010, and corrected

August 11, 2010, to ensure the continued airworthiness of these helicopters.

### **Costs of Compliance**

We estimate that this AD will affect 19 helicopters of U.S. Registry. We estimate that operators may incur the following costs in order to comply with this AD. It will take about 16 work-hours to install a shelf reinforcement kit per helicopter at an average labor rate of \$85 per work-hour. Required parts will cost about \$2,560 per helicopter. Based on these figures, we estimate the total cost of this AD on U.S. operators to be \$74,480 to reinforce the shelf of the entire fleet.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on helicopters identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the

national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a “significant regulatory action” under Executive Order 12866;

(2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

(3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2013-06-07 **Eurocopter France Helicopters:** Amendment 39-17404; Docket No. FAA-2012-1014; Directorate Identifier 2010-SW-058-AD.

**(a) Applicability.**

This AD applies to Model SA-365N1, AS-365N2, and AS 365 N3 helicopters, with the GV76-1 vertical gyro unit installed on the left-hand (LH) or right-hand (RH) shelf in the rear cargo compartment, pre-MOD 365P081895, certificated in any category, all serial numbers except 6698, 6701, 6723, 6737, and 6741.

**(b) Unsafe Condition.**

This AD defines the unsafe condition as an undetected flight display error of a slow drift in the roll axis. This condition could result in disorientation of the pilot and subsequent loss of control of the helicopter.

**(c) Effective Date.**

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(d) Compliance.**

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

**(e) Required Actions.**

(1) Before further flight, revise the Limitations section of the Rotorcraft Flight Manual (RFM) by inserting a copy of this AD into the RFM or by pen and ink changes to the RFM that prohibits flight in instrument meteorological conditions (IMC) or night visual flight rules (VFR) for each helicopter with a vertical gyro unit GV76-1 installed on the rear cargo compartment shelf without reinforcement per Modification 365P081895.

(2) Within 110 hours time-in-service, modify the GV76-1 vertical gyro unit shelf as depicted in Figures 1 through 3 and by following the Accomplishment Instructions, paragraphs 2.A. through 2.B.2.e., of Eurocopter Alert Service Bulletin No. 34.00.31, Revision 1, dated July 28, 2010. After reinforcing the shelf, operationally test the GV76-1 vertical gyro unit and functionally test the navigation systems.

(3) After modifying the GV76-1 vertical gyro unit shelf, remove this AD from the Limitations section of the RFM or remove any changes to the Limitations section of the RFM that prohibit flight in IMC or VFR as a result of paragraph (e)(1) of this AD.

(4) Modifying the GV76-1 vertical gyro unit shelf is terminating action for the requirements of this AD.

**(f) Alternative Methods of Compliance (AMOCs).**

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Mark F. Wiley, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email [mark.wiley@faa.gov](mailto:mark.wiley@faa.gov).

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.



**(g) Additional Information.**

The subject of this AD is addressed in European Aviation Safety Agency AD No. 2010-0100R1, dated August 4, 2010, and corrected August 11, 2010.

**(h) Subject.**

Joint Aircraft Service Component (JASC) Code: 3421, Attitude Gyro and Indicator System.

**(i) Material Incorporated by Reference.**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Eurocopter Alert Service Bulletin No. 34.00.31, Revision 1, dated July 28, 2010.

(ii) Reserved.

(3) For Eurocopter service information identified in this AD, contact American Eurocopter Corporation, 2701 N. Forum Drive, Grand Prairie, Texas 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at <http://www.eurocopter.com/techpub>.

(4) You may view this service information at FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to:

<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Fort Worth, Texas, on March 21, 2013.

Kim Smith,

Manager, Rotorcraft Directorate,  
Aircraft Certification Service.

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04/04/2013]